

Commissioner for Patents

REMARKS

Claims 1-21 remain in the application

Claims 1-3, 9, 13, 14 and 16 are herein amended.

On page 2 of the Office action, the Examiner states that the application does not contain an abstract of disclosure. Accordingly, an abstract on a separate sheet is provided herewith.

On page 2 of the Office action, the Examiner rejects claims 1-13 under 35 U.S.C. 102(b) as being anticipated by Ray (U.S. Patent No. 5,281,246). Ray discloses an air cleaner assembly in which a pair of cylindrical filters are placed horizontally in a casing. A back-flushing assembly 22 produces a backflow of air so as to pulse particles out of the filters 16. The back-flushing assembly 22 is shown in greater detail in Fig. 5A. The back-flushing assembly 22 features an air accumulator 98, as well as piping that extends into a filtered side of the filter 16, so as to release a blast of air via air-discharging holes 126 into the filter 16. The flow of air is controlled by a diaphragm valve 122.

According to the Examiner's objection, claims 1 and 13, among others, are considered to be anticipated by Ray because of the presence of a diaphragm 122. However, it is respectfully argued that the system of Ray is of a more complex type than that claimed in claims 1 and 13. More specifically, claims 1 and 13 pertain to the presence of a diaphragm directly within the environment of ambient filtered gas. Therefore, a movement of the diaphragm or ring vortex generator will therefore press the ambient filtered air and thus a reverse flow of the filtered air back toward the filter. It is that reverse flow of filtered gas that will dislodge particles from the filter.

Accordingly, the assembly of claim 1 and the method of claim 13 pertain to a configuration that is substantially simpler than that of Ray. No accumulator, no piping, and no valves are required, as the diaphragm or ring vortex generator act directly against the filtered gas.

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Accordingly, claims 1 and 13 have limitations that are absent from Ray, whereby the rejection under 35 U.S.C. 102(b) is traversed.

It is also observed from Ray that the filter cartridges 16 are horizontal. Therefore, despite a reverse flow of air, particles that are on an upper horizontal portion of the filter cartridges 16 will not be dislodged as efficiently due to the effect of gravity. The Examiner is referred to Fig. 2 of the present application, in which it is shown that the cylindrical filter 32 is vertical, as opposed to horizontal in Ray. Therefore, by having the cylindrical filter 32 oriented vertically, there is no filtration surface that is substantially horizontal.

Accordingly, the subject matter of claim 2 as currently amended is deemed to patentably distinguish over Ray.

The Examiner is referred to Fig. 9, in which it is seen that a panel filter 262 is positioned above slots in the bottom of the casing. Therefore, the filtration surface of the filter 262 will not be affected by gravity during the reverse flow dislodging the particulates. Accordingly, the arrangement of claim 3 is deemed to patentably distinguish over Ray.

On page 3 of the Office action, the Examiner rejects claims 14-21 under 35 U.S.C. 103(a) as being unpatentable over Smith (U.S. Patent No. 6,616,720) in view of Ross (U.S. Patent No. 5,873,919). Smith discloses a remote unit connected to a main unit for the control of airborne contamination. The units of Smith are standard filtration units in which the filters are positioned within units. For instance, there is illustrated in Fig. 7 a cutaway view of the main unit showing the various filters therein. Claim 14 emphasizes that the filter is positioned exteriorly with regard to the particulate treatment station, so as to be removable therefrom with a reduced exposure of the first filter by the operator. Accordingly, claim 14 has structural limitations that are absent from Smith and from Ross as well.

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In view of the above amendments and remarks, this application is considered to be in condition for allowance, and early notice to that effect is earnestly solicited.

Respectfully submitted,

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By:

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(Date)

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Encl.